BROMELIAD SOCIETY OF SAN FRANCISCO

October 2010

NEWSLETTER

Our next meeting will be held on **Thursday, October 21, 2010** at 7:30 PM
Recreation Room, San Francisco County Fair Building, 9th Avenue at Lincoln Way, Golden Gate Park, San Francisco

October Program

Unusual Bromeliads from A-L

This month we will have a visiting speaker from Florida: **Dr. Terrie Bert**. She first spoke to our society last year when she covered the origins of the bromeliad family. This year, Terrie will cover unusual bromeliads that most of us probably have never seen and are unlikely to grow in our collections.

Terrie has served on the Florida Council of Bromeliad Societies, Bromeliad Society International board of directors, authored many articles for bromeliad journals. She has a bromeliad collection consisting of 1,500 different types of bromeliads in 24 genera and has won many top awards at bromeliad shows. Please welcome Terrie as our October guest speaker

Terrie is also bringing mostly bromeliad species to sell, so bring your checkbook!

Dr. Terrie Bert is our speaker for this month. Photo is courtesy of Bromeliad Guild of Tampa Bay

October Refreshments

Harold Charns and **Jon Dixon** signed up for refreshments this month**.**

September Meeting

Richard Wiggin's show on Ecuador exposed us to life in a small village in Ecuador. He has been visiting this village for many years and we got to see photography of the local people in their unique dress that we would never see as a tourist. Most of the bromeliads that we saw were tillandsias and *Tillandsia secunda* was the most common growing like weeds along the sides of the road. Our president brought in a *T. secunda* in flower for the show-and-tell. Thanks Richard for showing us a side of Ecuador that we would never see.

Thanks to all of the members who donated many plants for the plant table. Most of us went home with many new bromeliads.

The Colour in Neoregelias Believe it or Not

John Catlan is the author of this article that is reprinted from the January 2006 newsletter of the Bromeliad Society of Houston. Mr. Catlan is a hybridist, nurseryman and grower from Queensland, Australia.

1. **Inner leaf colour**
2. **Light blushing**
3. **Temperature variation**
4. **Sun tanning**
5. **Ring spot**
6. **Discolour syndrome**
7. **Chlorophyll**
8. **Variegation**
9. **Finger nail**
10. **Speckling**
11. **Fertilizer**
12. **Blood water**

1. Inner leaf colour: The centre of many Neoregelias produce a flush of colour which begins with the initiation of flowering. The colour ranges from green, white and various shades of red through to purple. With some Neoregelias the colour fades rapidly while others last for twelve months or more.

2. Light blushing: The top layer of cells in the foliage of plants of the *Neoregelia carolinae* complex and others has the ability to flush with colour. This flush of colour is governed by light intensity, day length and nitrogen levels.

3. Temperature variation: Especially during spring with fluctuating periods of temperature, Neoregelias such as *Neoregelia* Bob and Grace and *Neoregelia* Lambert's Pride, the green banding is initiated. Increased fertilizer may increase the banding but there is a limit. What I believe happens is the discolour-syndrome layer of cells is laid down during its growth and as the growth exceeds the normal rate it leaves gaps in the colour. All these plants are subject to sun tanning.

4. Sun tanning: Is associated with the top layer of chlorophyll cells. The same as light blushing. The difference between light blushing which will fade in decreased light is that sun tanning is fixed. Once it happens, it is there forever. The *Neoregelia* Charm, *Neoregelia* Gold Fever, *Neoregelia* Gespacho, *Neoregelia* Red Planet, etc. are subject to sun tanning and hide the variation of colour in the lower layer of cells forever, but if you turn the leaf over, you will find the spotting has not changed. In some *Neoregelia concentrica* hybrids you find sun tanning may affect 25cm to three-quarters of the leaf and is normally black and is fixed and is in the top layer of cells. On a dark night, shine a torch from the bottom of the leaf through the black sun tanning, you will find little green flecks, cells that did not tan. Also, you can see ring spot in the lower layer of cells that the sun tanning has hidden. Sun tanning starts from the tip of the leaf and works down.

Geoff Lawn took this picture of *Neoregelia* Gespacho. Photo is courtesy of the Florida Council of Bromeliad Societies.

5 Ring spot: Is caused by evaporation of water from the meniscus of the cup water and droplets. The cooling effect of evaporation is so sudden that the cells on the leaf surface cannot cope and rupture. They then cease to function allowing sunlight to tan the lower layer of cells. This happens in winter or summer, shade or bright conditions. It is the variation of temperature that begins the effect. Open conditions and low humidity in winter allows for more rapid cooling.

6. Discolour syndrome: In a dense forest, the foliage can restrict the light that reaches the forest floor so that it may be as low as one percent. In these low light areas, the majority of this light is red and plants with discolour foliage have developed this adaption to absorb the maximum of red light available. The green top layer absorbs the blue light; the red light is absorbed and reflected by the bottom layer of red cells. The light that is reflected back through the green cells gives these cells a second chance to absorb the light. When you see discolour leaved bromeliads you know they require low light. With *Neoregelia* Charm, *Neoregelia* Gold Fever, *Neoregelia* Gazpacho, *Neoregelia* Bobby Dazzler, etc. all have these red cells in the middle layer of cells. I believe they are an adaption to take advantage to take advantage of low light. As this does not fit the meaning of discolour, I refer to it as discolour syndrome. These plants are green spotted and look better and perform better at lower light levels. All these plants have a safety factor against high light intensity. The top layer of cells is subject to sun tanning. In the red spotted layer of cells the colour is fixed and it doesn't matter how low the light level gets within reason, the colour remains.

7. Chlorophyll: Comes in various strengths from yellow in *Neoregelia* Gold Fever to green in *Neoregelia* Charm. The yellow chlorophyll allows the reds to have a clear iridescent colour, while green chlorophyll darkens the red. Fertilizer will darken the chlorophyll cell and consequently darkens the red.

8 Variegation: These are stripes that run the length of the leaf and may be white, yellow, red, and anything in between. The only comment is that Neoregelias that have the discolour syndrome that are variegated, the chlorophyll cells in the top layer turn white and the bottom layer stays red. Because the green disappears altogether, the red glows with a clarity that is stunning.

9. Fingernail markings: These red tips to the leaves are intriguing in that in very bright light they darken in colour and in low light they glow. *Neoregelia spectabilis* that has these striking fingernail markings has green centre leaves. Why? I was told it was to attract birds that would pollinate the flowers and I believed them. Then, I thought about it! The fingernail colour lasts from the beginning to the end of the plant. So, for four to five years, birds visit this *Neoregelia spectabilis* in anticipation of a four week window of opportunity to obtain nectar. Not a very cost effective pastime for birds.

Matthias Asmuss took this picture of *Neoregelia spectabilis*. Photo is courtesy of the Florida Council of Bromeliad Societies.

10. Speckling: *Neoregelia* Barbarian has very fine speck markings. These plants are subject to sun tanning but the centre leaves remain speckled.

Sharon Petersen took this picture of *Neoregelia* Barbarian. Photo is courtesy of the Florida Council of Bromeliad Societies.

11. Fertilizer: Very mild fertilizer will enhance colour. Too little fertilizer and any excessive stress, light, heat, cold, or lack of humidity will damage plants. Too much fertilizer and green will be your favourite colour.

12. Blood water: If you tip the water out of some bromeliads, you will find it tinged red. The explanation given is that Neoregelia growers drip their blood into the bromeliad cups in an effort to enhance the colour. I've tracked this bromeliad myth down to a few Tillandsia, Guzmania, and Vriesea growers who are jealous of the fact our neoregelias are coloured through their life span while their silver or green plants have to flower before becoming interesting.

Take Time to Smell the Bromeliads

This is a reprint of an article that originally appeared in the October 1989 Bromeliad Hobbyist and is taken from the November 2002 Caloosahatchee Meristem, newsletter of the Caloosahatchee Bromeliad Society.

Some of the bromeliads make sure that you know they have a fragrance; others are more subtle. There are those whose aroma is stronger in the daytime – sometimes choosing AM or PM hours; others who prefer to tantalize you in the evening hours. Color of flowers does not seem to be a factor; they can be yellow, white, green or blue.

Tillandsia usneoides has a pale green flower that can be difficult to distinguish among the foliage, but if you are anywhere in the area around the middle of the day, your nose can lead you unerringly to the source.

Tillandsia cyanea has clones with large cerulean flowers that emit a delightful spicy aroma. It is not a potent odor and you miss it if you don't check with your nose. I have found that not all clones have a fragrance or else it was so faint that I couldn't detect it. [The *T. cyaneas* that we sold at our June sale this year did have that spicy aroma. – Ed.]

Ken Marks took this picture of *Tillandsia cyanea*. Photo is courtesy of the Florida Council of Bromeliad Societies.

Tillandsia crocata has small yellow flowers that remind me of an expensive perfume. If it is grown in an enclosed area, a few flowers will perfume the air. *Tillandsia aureobrunnea* (not a listed name) is very similar.

Tillandsia mallemonti is amazing! This tiny plant should be allowed to become a clump and the aromatic blue flowers will seem to appear almost throughout the year. The fragrance is much stronger in the late afternoon.

Tillandsia caerulea and *Tillandsia humilis* must not be forgotten – they won't allow it! They are both delightful. *Tillandsia nuptialis* and *Tillandsia monadelphia* have white flowers. Their fragrance is only slight, but it is more noticeable in the early evening.

Tillandsia cacticola is very perverse (I used to think that if there was no fragrance, that was one of the identifying features). There are only random clones with a fragrance. I have five clones and only one has ever had an aroma.

All the *Tillandsia xiphioides* I have seen have had white flowers; however, in FLORA NEOTROPICA, MONOGRAPH NO 14, Lyman Smith and Robert Downs, it states the flowers can be either white or violet. This is a great plant. The

silvery foliage is pretty and the beautiful white flowers with an aroma are a welcome bonus. This one beckons with its odor for some distance.

Derek Butcher took this picture of *Tillandsia xiphioides*. Photo is courtesy of the Florida Council of Bromeliad Societies.

Tillandsia streptocarpa and *T. duratii* could never be ignored. Their fragrance is strongest during the day, but they will emit an odor in the evening. Their lavender flowers even seem to retain some of the odor after they have wilted.

Billbergia horrida is one of the elite groups. It is not an outstanding odor – not offensive, but rather bland. Some have compared it to the odor of Ivory Soap.

Derek Butcher took this picture of *Billbergia horrida v. tigrina*. Photo is courtesy of the Florida Council of Bromeliad Societies.

Some of the Vrieseas with white flowers that usually flower at night have a fragrance. I haven't found one that really intrigued me, but I would guess it is Mother Nature's way of notifying the proper pollinators that the flower is ready for pollinating.

There is a small Catopsis with a yellow flower that has one of the most captivating fragrances I have found. It has absolutely no odor during the day, but it is delightful in the evening. I suspect there may be other Catopsis with a fragrance, but I just haven't caught them at the right time.

BROMELIAD SOCIETY OF SAN FRANCISCO (BSSF)
The BSSF is a non-profit educational organization promoting the study and cultivation of bromeliads. The BSSF meets monthly on the 3rd Thursday at 7:30 PM in the Recreation room of the San Francisco County Fair Building, 9th Avenue at Lincoln Way, Golden Gate Park, San Francisco. Meetings feature educational lectures and displays of plants. Go to the affiliate section of the BSI webpage for information about our meetings.

The BSSF publishes a monthly newsletter that comes with the membership. Annual dues are single ($15), dual ($20). To join the BSSF, mail your name(s), address, telephone number, e-mail address, and check made payable to the BSSF to:
Harold Charns, BSSF Treasurer, 255 States Street, San Francisco, CA 94114-1405.

BSSF 2010 OFFICERS & DIRECTORS

PRESIDENT	Carl Carter	510-661-0568	carl.carter@ekit.com
VICE PRESIDENT	Bruce McCoy	510-835-3311	bruce.mccoy@gmail.com
SECRETARY			
TREASURER	Harold Charns	415-861-6043	Harold@States-Street.com
DIRECTORS:			
	Roger Lane	650-949-4831	rdodger@pacbell.net
	Marilyn Moyer	650-365-5560	MarilynMoyer@comcast.net
	Peder Samuelsen	650-365-5560	Pedersam@comcast.net
	Peter Wan	408-500-2103	peterkwan@earthlink.net

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BROMELIAD SOCIETY
OF
SAN FRANCISCO

Roger Lane
Newsletter Editor
551 Hawthorne Court
Los Altos, CA 94024-3121

Expect to see some unusual bromeliads this month!